Willkommen im

BEV

Bundesamt für Eich- und Vermessungswesen

# Antenna Tests at BEV Vienna 2002-2005

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# Purpose

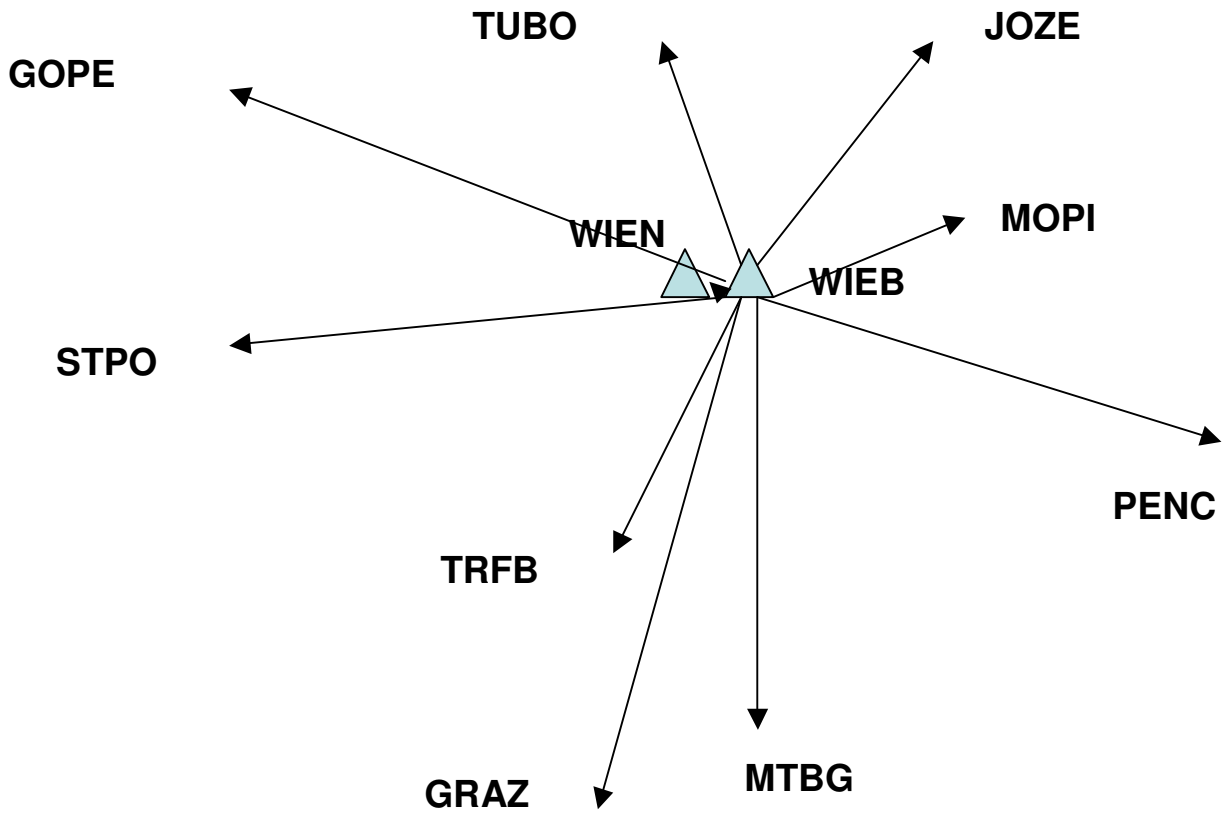
- Equipment test (ca. 50 combinations receivers+antennas+radomes)
- Stability of coordinates
- Stability of environment (City, transmitters)

# Test Network

**Star network**

**WIEB-WIEN 6 m**

**Others 20-500 km**



# Equipment Types

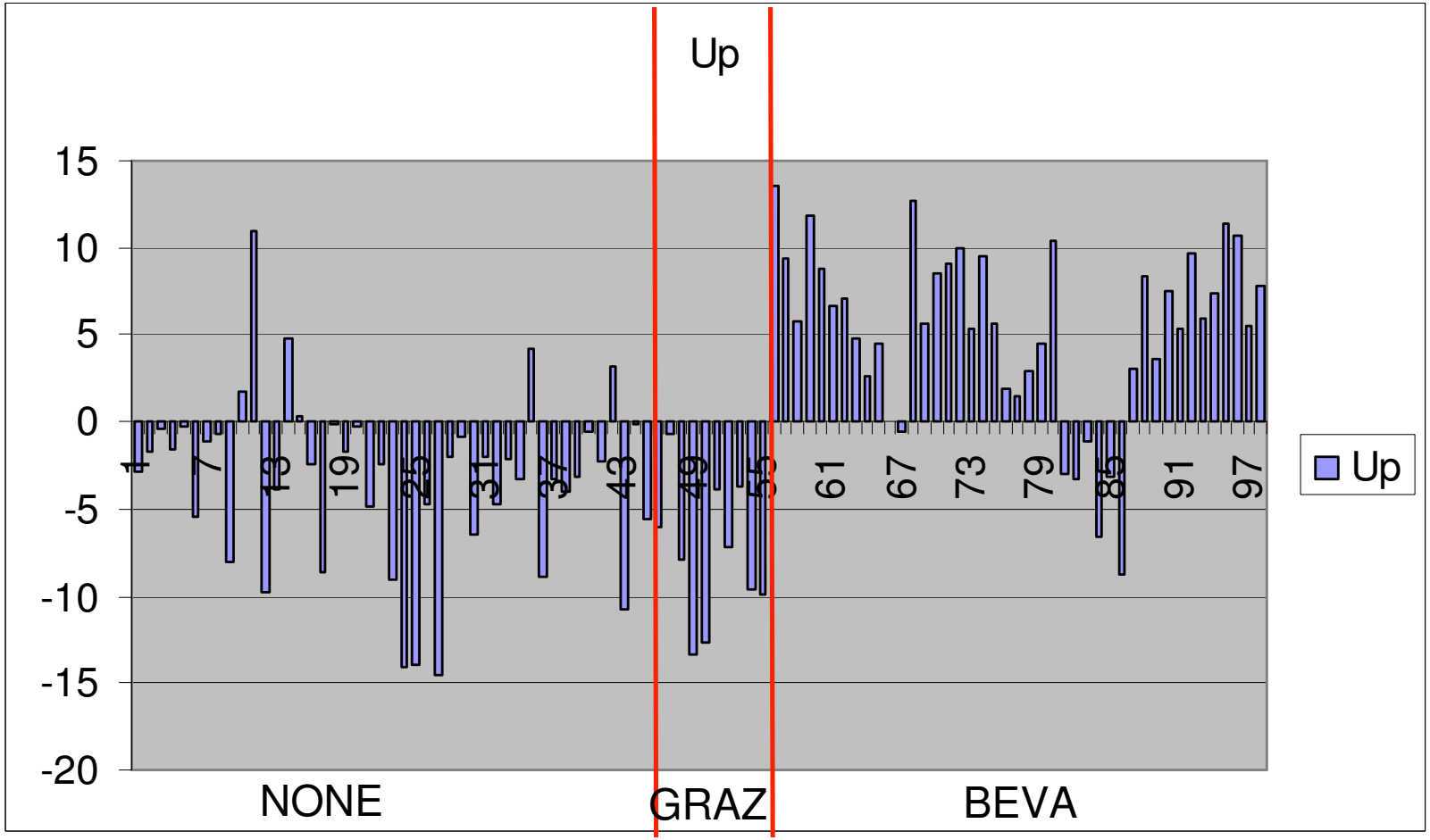
- Ashtech
- Geotracer
- JPS
- Leica
- Topcon
- Trimble

# Time Series

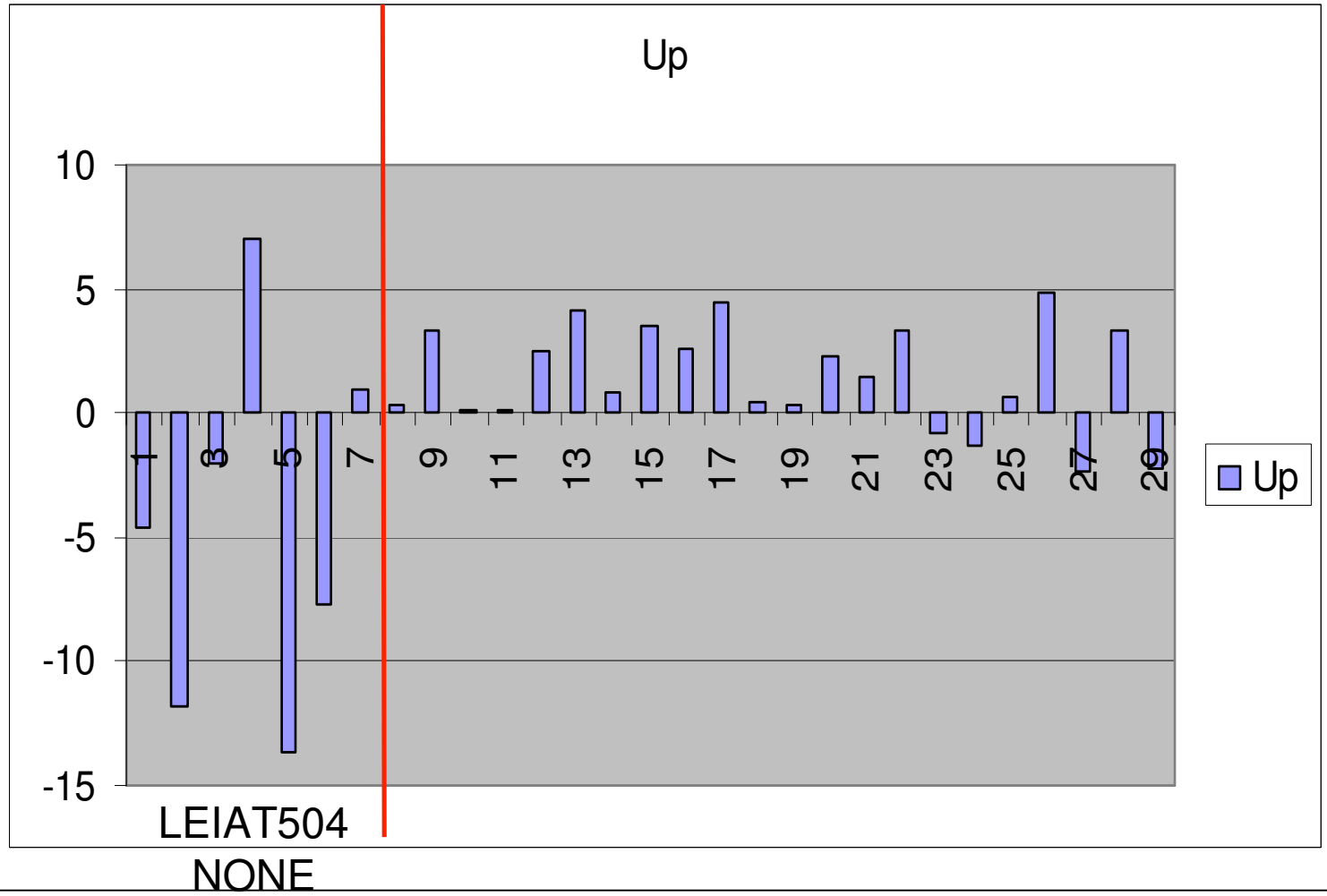
- 2002
- DOY 219-226, 240-247, 271-285, 293-300, 320-327
- 2003
- DOY 063-078, 165-219, 237-241, 244-364
- 2004
- DOY 001-085, 117-131, 201-240
- Since 2005 WIEB in APOS network

# Site WIEB with BEVA Radom (most used)

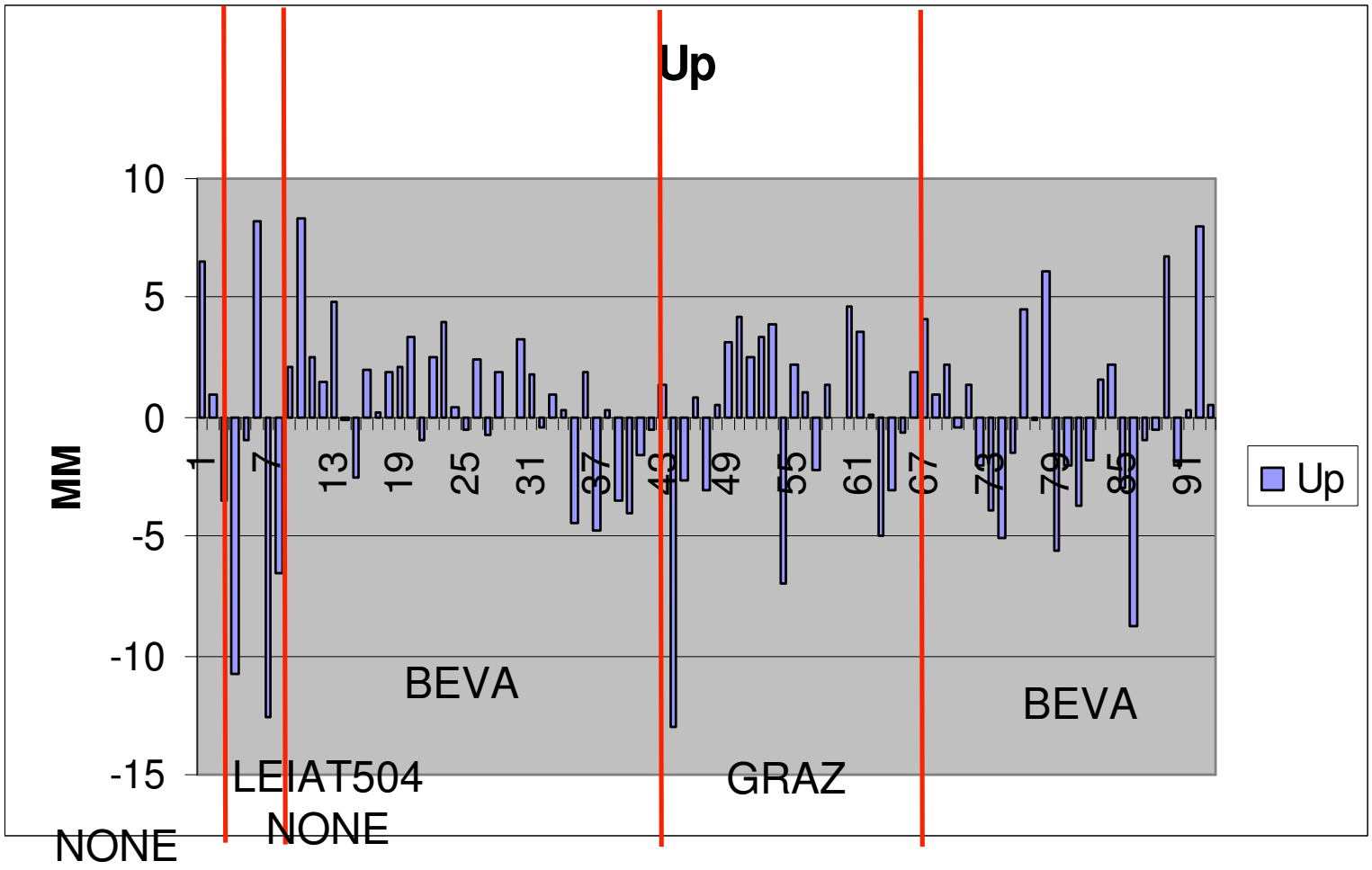
# LEIAT504 Radom Tests (U)



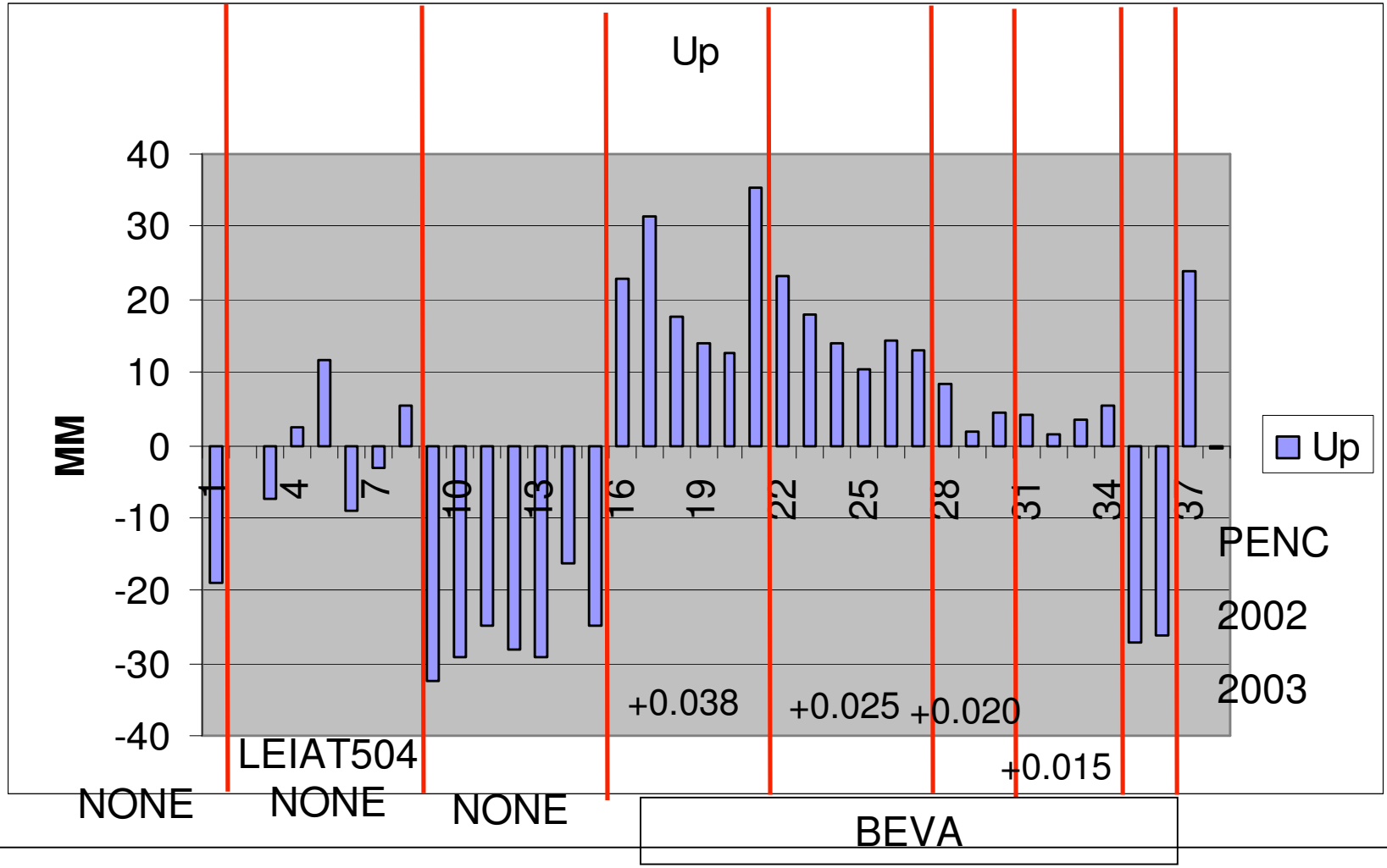
# ASH701045C_M BEVA – LEIAT504 NONE



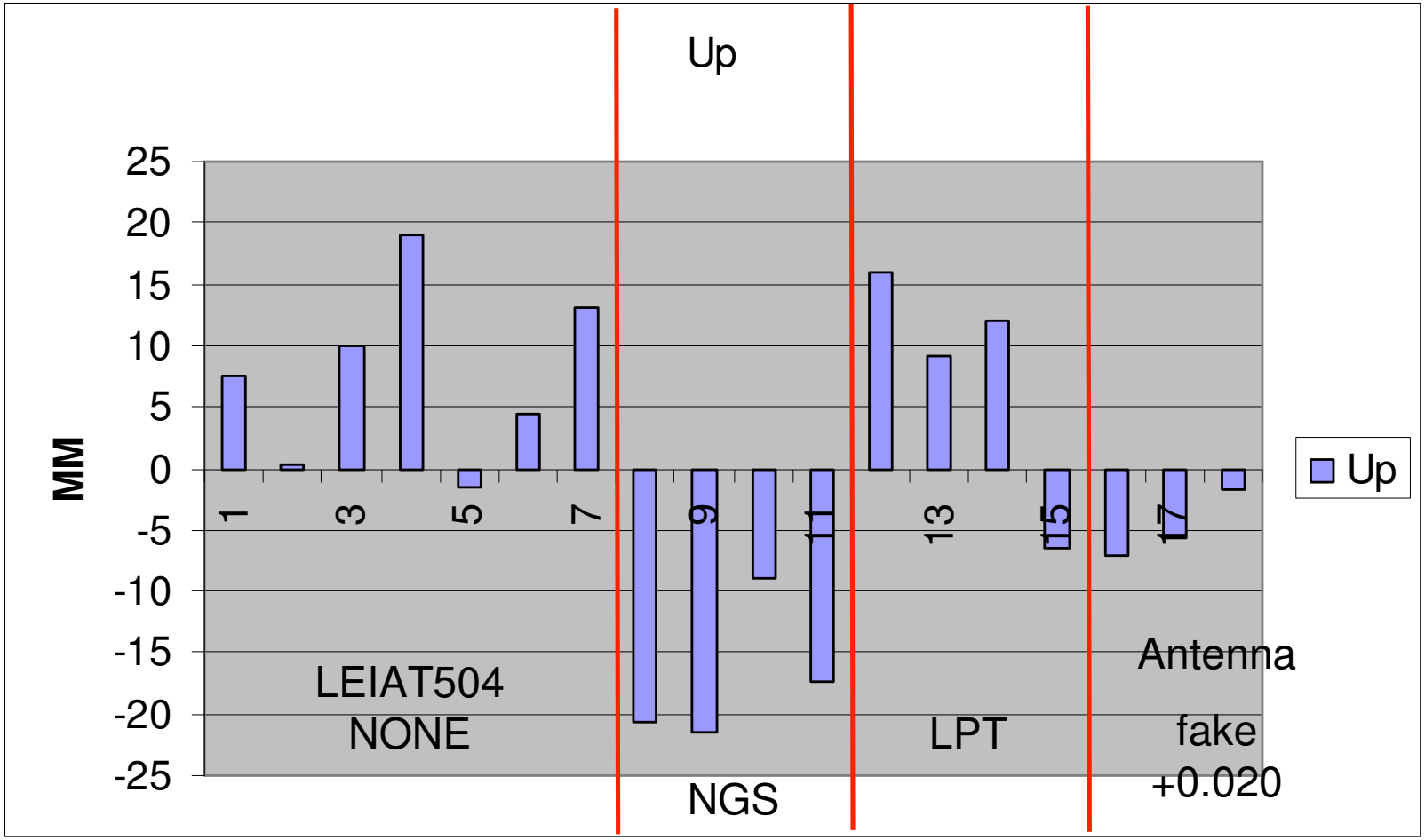
# TRM29659.00 – LEIAT504 NONE



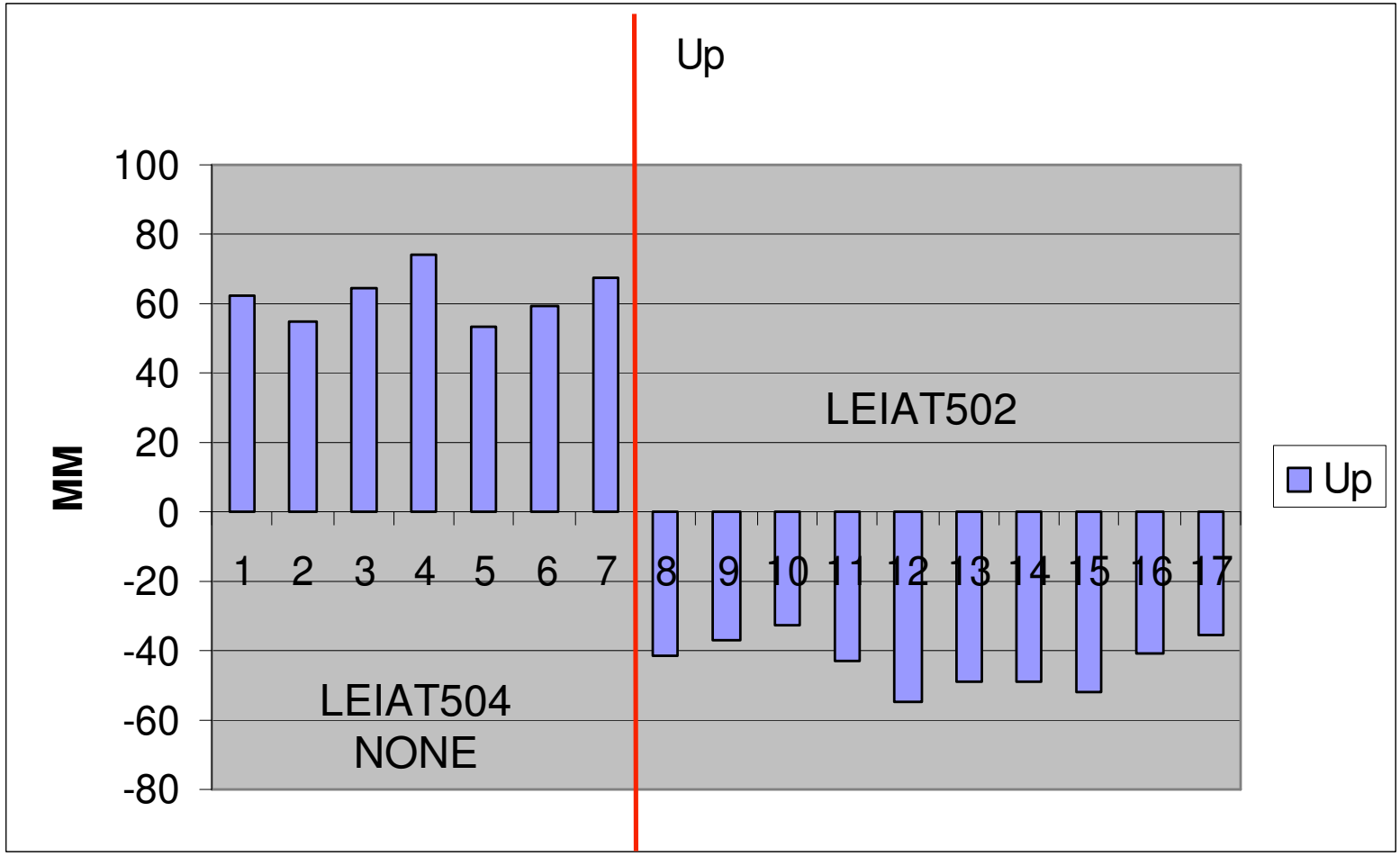
# TRM41249.00 NGS Corrections – LEIAT504 NONE
## Correct and Fake Antenna Heights



# TRM41249.00 Different Corrections

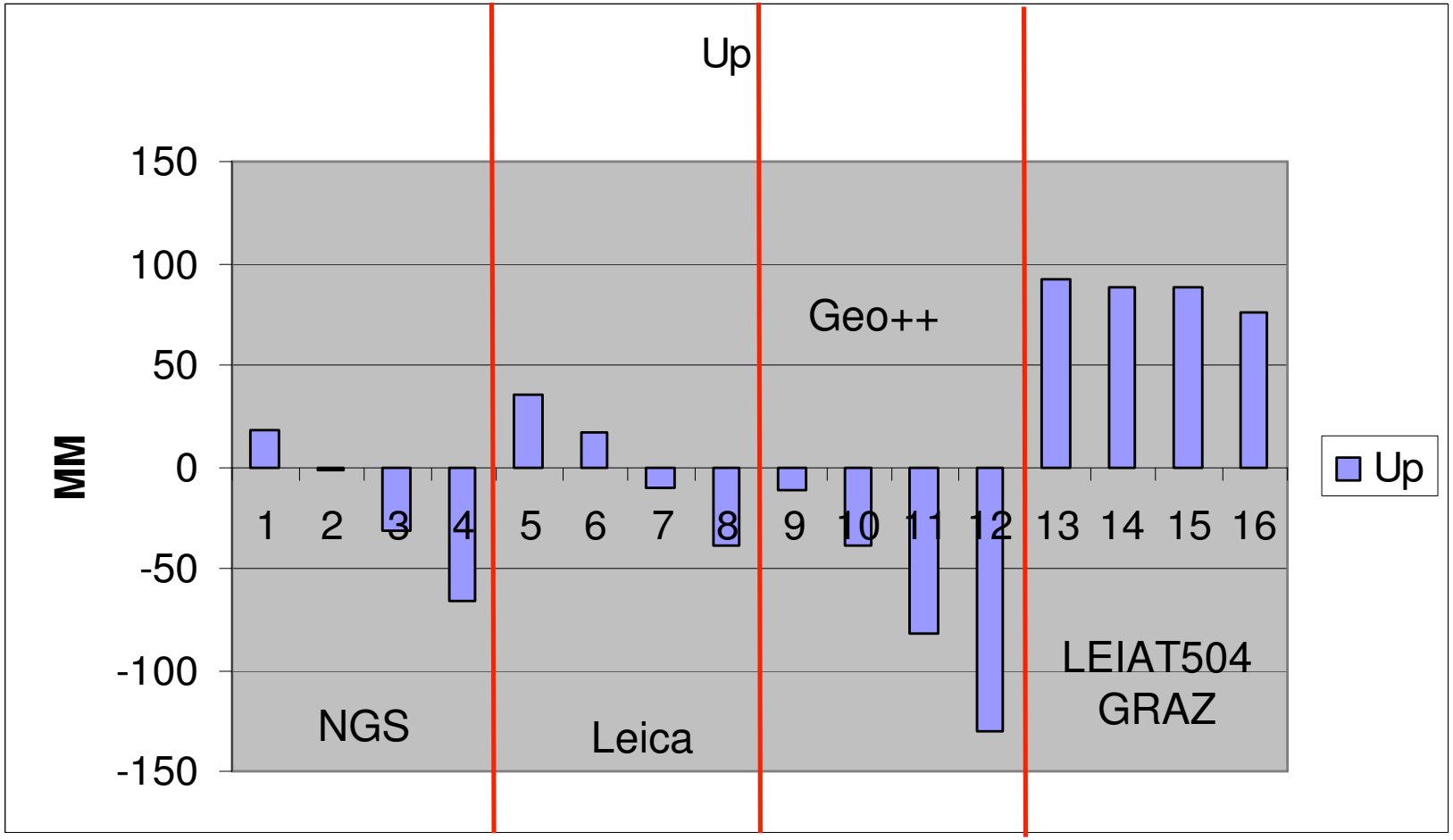


# LEIAT502 – LEIAT504 NONE



# LEIAT502 Correction Sets

## Elevation cut-off 5/10/15/20 degrees



# Conclusions/Recommendations

- LEIAT502: not usable for precise permanent stations – appropriate correction for Bernese Software still missing, large elevation dependency probably caused by antenna design
- Trimble Zephyr: Replace NGS corrections by LPT corrections by international convention, until then a faked antenna height would be best to avoid height jumps in the time series
- PENC: Not usable anymore for Austrian EUREF representation (distortion by height jump after antenna exchange)

# Thank you for attention!